

Title of Presentation: Assessing Physician Response to Interventions to Improve the Quality of Prescribing Behavioral Medications

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Background: The cost of psychotropics is increasing at a faster rate than other prescription drugs and accounts for nearly one-third of the total pharmacy benefit costs. Therefore, it is important to understand physician prescribing habits, identify potential inappropriate prescribing, implement intervention strategies that address improper utilization of behavioral medications and understand the means to achieve more appropriate use of medications without the use of tactics that place barriers between physicians and their patients. We studied the response of physicians to a quality improvement intervention, Behavioral Pharmacy Management (BPM) program, by assessing the impact on hospital admissions and total non-pharmacy costs of care for Medicaid recipients. The intervention is predicated on profiling and modifying physicians' prescribing practices through an educational intervention in an effort to bring prescribing into alignment with best practice guidelines. This is done by retrospectively analyzing pharmacy claims databases and is advantageous in that it allows full access to medications and permits the physician to individualize therapy. By using information technology, the intervention uses a new and unique approach to managing the issue of rising prescription drug costs. The primary hypothesis in this study is that if we can optimize prescribing with the intervention it will result in decreased rates and use of hospital services, a recognized outcome for interventions, and this subsequently will decrease the overall cost of care for the patient.

Methods: The study uses Missouri Medicaid claims databases and the physician outlier and mailing data produced from the BPM intervention program. A before-and-after design uses the patients as their own controls. Differences in hospital utilization, total behavioral pharmacy costs and total medical service costs of care for recipients are the outcome of interest. Medicaid recipients whose physician received a BPM intervention mailing during the months of interests were used as cases. Medicaid recipients whose physician received a BPM intervention mailing for at least one of the program's quality indicators during two consecutive mailings (January and March 2004) were used as cases

for this analysis. There were 1911 intervention cases for this analysis. To document any contemporaneous trends in either admissions or payments for patients receiving behavioral medications in the fee-for-service Medicaid programs during the time period of the study, we constructed a comparison group in both Missouri and Utah using the propensity scoring technique. Propensity score matching is one of the more robust methods currently available to identify a matched comparison group when using administrative claims data.

Results: Among the intervention cases, there was a statistically significant decrease in rates of hospitalizations, mean number of hospital admissions, and total average non-pharmacy medical costs incurred by recipients. The rate of hospitalization among intervention cases showed a change from the pre-exposure to the post-exposure period with rates of 16.8% and 9.5%, respectively. The mean number of hospital admissions among intervention cases decreased from 0.31 in the pre-exposure period to 0.16 in the post-exposure period for an overall reduction of 0.15 admissions per recipient. There were statistically significant decreases in total hospital days for intervention cases with 1813 fewer days in the post-exposure period (1681) compared to the pre-exposure period (3494). Finally, the analysis of total non-pharmacy charges incurred by the cases are consistent with the hospitalization results with significant decreases in total charges experienced in the post-exposure period compared to pre-exposure. Intervention cases demonstrated a reduction in charges of \$1239 with an average six-month charge total of \$5109 in the post-exposure period compared to \$6347 in the pre-exposure period. There were no detectable changes in the outcomes within the control group between the time periods which indicates that there were no time influences on admissions or payments during the time period of analysis.

Conclusions: In addition to being a quality improvement tool that is designed to align physician prescribing practices with best practices, the BPM intervention appears to be associated with a decrease in hospital utilization and total non-pharmacy cost of care and the outcomes are achieved without traditional managed-care tactics.